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History Of Citrus Culture In Florida

*Citrus Fruit Industry &
Trade History*

H. HAROLD HUME, IN RADIO TALK, OCTOBER, 11, 1935

Citrus fruits produced in Florida for use in a fresh state are represented in the trade by sweet oranges, Mandarin oranges, grapefruit, lemons, limes and kumquats. Besides these, two others, the citron and the sour orange, are used in preserving but are not handled in commerce for consumption as fresh fruit.

Citrus orcharding had its beginnings in Europe and the cultivation of these fruits was undertaken at an early date. The first citrus fruit to find its way to that continent was the citron (*Citrus medica* L.). It was grown in Sicily in some quantity as early as 1003 and it was Gallesio's opinion that it was introduced into Italy as early as the third century. It is difficult to arrive at the date of introduction of the lemon since botanically it was not separated from the citron in those earlier years. However, it is recorded by Falcando that in 1260 very acid lemons were grown near Palermo and in Tuscany outside the areas in which they occur as wild or native fruits. The first oranges known in Europe were sour or bitter ones. Books and chronicles of the Arabs mention only sour oranges up to the fifteenth century. By then it was introduced into Spain as well as other areas along the Mediterranean. The Crusaders, also, probably had a part in its introduction. Sour oranges were cultivated in Salerno, Sicily, as early as 1003.

The introduction of the sweet orange apparently came at a later date. The Portuguese reached India in 1498 and the coasts of China in 1516 or 1518 and they claimed the honor of bringing the sweet orange first to India and later, between 1545 and 1548, to Portugal. The name of the actual introducer, Jean de Castro, is recorded. The Portuguese claim, however, is disputed and the date for the European introduction of the sweet orange is set by some writers at an earlier date. There seems to be a fair amount of agreement on the date 1523 or 1525. At any rate, by the beginning of the Sixteenth century oranges were grown in the open in several of the warmer parts of southern Europe and their culture under cover had been undertaken in many of the colder regions. There came into existence an extensive literature having to do with growing citrus fruits under the protection of various sorts of structures.

No citrus fruits are native in Florida and the above brief resume is given because Europe was the way-station in the journey of citrus fruits from China and adjoining areas to America. In the early years of the white man's occupancy of America the only contact with Asia was by way of Europe and the first introductions to America were evidently established in the West Indies, perhaps in the island of Santo Domingo. Re-

cently, proof has been presented that Columbus, on his second voyage, 1493, brought seeds or oranges, lemons and citron to America. Granting the correctness of this statement, the evidence is to the effect that these were the seeds of sour oranges. There can be little question, however, that whether at this time or a later date, sweet oranges were first grown in the Western Hemisphere in the West Indies. Again these islands were way-stations in the voyages of the Spaniards to the eastern coasts of North, Central and South America.

The introduction of citrus fruits into Florida did not antedate 1565, the year in which St. Augustine was founded. Exact information on this event, for event it was, is lacking but it is reasonable to believe that the first citrus fruit planting in the mainland of North America was made in St. Augustine, probably with seed, and so the citrus industry of Florida began there in a garden. It was the main Spanish settlement and for many years the capital of the province. From a letter dated at St. Augustine, April 2, 1579, written by the Governor, Pedro Menendez Marques, to the Audiencia of Santo Domingo, the following statement is quoted:

"There are beginning to be many of the fruits of Spain, such as figs, pomegranates, oranges, grapes in great quantity;

(Continued on page 8)

Soils Suited To Citrus In Florida

BY O. C. BRYAN

PROFESSOR OF SOILS, UNIVERSITY OF FLORIDA, COLLEGE
OF AGRICULTURE

Citrus is one of Florida's most important crops, comprising more than one-third of the state's entire crop value. It requires a greater investment and outlay of commercial fertilizers than any single crop in the state. Yet, it suffers many extremes, resulting in a wide range of profits and losses, many of which are directly traceable to the type of soil on which they are grown.

Since citrus is inherently subtropical in nature, it is confined very largely to the Florida peninsula; but may be grown as far north as Alachua and Duval counties with proper water protection from cold injury. In the main, however, the crop is confined to the upland soils in the peninsula known as the ridge section from Marion county south and along the east coast from Daytona to Homestead and from Tarpon Springs to Ft. Myers on the west. Although the trees may grow on a wide variety of soil types, they will not survive long on wet water-logged soils.

As a rule uplands soils in the peninsula which have good air drainage are considered the most successful for citrus production and even there the numerous lakes are sometimes valuable protection in moderating the temperature. It is interesting to note that the low lying soils and valleys, which constitute the greater part of the Florida peninsula are not adapted to the production of citrus unless they have ample water protection. Where this is the case along either coast or inland, the crop may be successfully grown.

The upland soils in the peninsula consist in a large part of Norfolk sand and fine sand, with limited areas of Eustis, Orlando, Gainesville, Lakewood, St. Lucie and Hernando fine sands and sandy loams. Since citrus requires a considerably amount of basic elements such as calcium and potassium, the Gainesville and Hernando soils having a limestone origin, are inherently more adapted to this crop, than the Norfolk soils, other factors being equal. The Gainesville and Hernando soils are characterized by a gray to chocolate brown surface underlain with a brown to reddish brown clay which usually contains fragments of chert and limestone

residues. The Coquina rock underlying the Gainesville sands along the East Coast retards root development and for that reason, these sands are not very well suited to citrus. The Norfolk soils are characterized by a gray surface underlain with a yellow friable sand to a depth ranging from 4 to 20 or more feet. The Eustis soils though limited in extent, differ from the Norfolk in having a reddish color in the underlying material. The Lakewood soils are deeper and more porous than the Norfolk soils, and have an orange colored subsoil. Because of this porous character they are more droughty and not as well suited to citrus as are the Norfolk soil. The St. Lucie sands, sometimes known as scrub and sand dunes, are almost white to a depth of eight or more feet except for a thin layer of gray sand on the surface. These sands are still less suited to citrus, because of their droughty nature and low content of plant nutrient. The soils on the lower East Coast consisting of a light gray sand overlying an Oolitic lime rock at a depth ranging from one to three feet are known as Dade sands. This Oolitic rock interferes with root development in places and therefore lowers their suitability for citrus. Yet, their protection from cold place them in the list of citrus soils. The Palm Beach sands, characterized by a speckled shell appearance along the East coast, are better adapted to citrus, than the Dade sands. Both are limited in extent, however.

The Orlando sands and fine sands though inherently more productive than the Norfolk soils due to their higher content of organic matter are somewhat more subject to cold injury, due to their lower elevation. But in most instances the Orlando soils have reasonably good protection.

The low lying position of the Ft. Meade and Blanton soils make them too susceptible to cold injury, thereby reducing their suitability for citrus, although they may be inherently more fertile than the Norfolk soils. This is especially true regarding the black colored Ft. Meade fine sands in the Peace River valley.

Thus we see that the Norfolk soils

though not inherently the most productive, owe their extensive citrus plantings to their good air drainage, elevation friability and depth. Over 50 per cent of the citrus produced in the state is grown on the Norfolk soils. The shallow places having a sandy clay at four to five feet from the surface have a higher moisture and nutrient capacity than the deeper places and for that reason are better adapted to citrus. Moreover the fine sands are more suited to citrus than the sands because of the capacity for moisture. The hammock phase of the Norfolk fine sand is one of the best citrus soils in the state.

If properly drained some of the low-lying soils may be profitably grown to citrus when protected from cold. Of these soils the Parkwood and Fellowship sandy loams, Scranton, Bladen and Portsmouth fine sands are adapted to the production of citrus in the order given. All of these types are inherently more fertile than the Norfolk soils, but their lower elevation is more conducive for cold, and for that reason limit their adaptation to the growing of this crop, except those areas having good water protection. The Parkwood and Fellowship soils, both of which have a black surface underlain with marl in the former, and plastic clay in the latter, make them very well suited to citrus because of the limestone origin. Some claim that these types of soils are most ideal for citrus production when properly protected from cold. However, the shallow phases of the Parkwood soils retard root development and therefore are not suited to citrus. The Scranton soils when protected from cold make good citrus lands, because of their high organic supply and plant nutrients. But as a rule the element of cold risk on these soils is high. Moreover, they are not extensive.

In a few instances the Bladen and Portsmouth fine sands are satisfactory grown to citrus when drained and properly situated regarding water protection. They too are productive but their low elevation limits their adaptation.

A few areas of muck are grown to citrus, but these soils also suffer from

(Continued on page 18)

THE GROWERS' OWN PAGE

Citrus Growers

Will The Florida Growers Ever Learn?

BY JOE KNIGHT

San Souci Groves, Elfers, Florida

Will the Florida growers ever learn? Will they ever adjust themselves and their situation? Will they ever stop the shipping of green fruit—the wholesale shipping of fruit of inferior grades and the promiscuous shipping of any and all kinds of grades of fruit? And the situation appears to be getting worse—not better. The growers can never expect the industry to be what it should, or to get anywhere, until they adjust themselves. The performance of the growers year after year is foolish, disgusting, disastrous and almost criminal. And it is the same old story year after year. If it is not one thing, it is something else. If the growers will, it is up to them to correct the deplorable, pitiful condition now existing in the citrus industry of Florida. The growers own their fruit—it is their proposition. They and they alone can remedy our situation. No one else can do it for them and no one else is to blame for our condition, poor prices, bad markets, etc.

One would think that among some 13,000 growers there would be enough business sense shown to withhold the wholesale shipping of green, absolutely immature fruit this season after giving the state the black eye it received last season by the unrestricted, deliberate shipping of that enormous amount of frozen fruit due to our last year's freezes. I heard a man say the other day that he believed there was more lack of sense to the square inch among the Florida growers than in any other body of men that he knew of. And I am certainly inclined to agree with him. California wants to co-operate with us, but we seem to be unable to organize to control ourselves and co-operate among ourselves in order to properly co-operate with our great and well organized sister state. As we are performing it is impossible for California to go along with us, and by all means we should certainly co-operate with California. California has tried to co-operate with us, but we won't put ourselves in

This department is devoted to the growers, for their use in giving expression to their views and a discussion of growers' problems. Any grower is welcome to make use of this department for the discussion of topics of interest. The only requirements are that the articles must be on some subject of general interest, must be reasonably short and must be free from personalities. The editor assumes no responsibility for views expressed, nor does publication imply endorsement of the conclusions presented.

position whereby she can. She is disgusted with us and the Florida growers as a whole.

The buyers in the markets want to co-operate with us. They are our friends and want to stretch a point to give us every cent for our fruit that they can to enable them to at least make a profit. But our pretense of shipping fruit on the markets as compared with California is downright pitiful and usually disastrous, to say the least. We have too many marketing agencies shipping any and all kinds of grades of fruit out of the state.

The reason the Exchange does not command and hold a larger volume of fruit is because it has been incompetent. And it doesn't do any good going around giving talks asking growers to join an organization when it cannot perform. If we had three or four good reliable marketing organizations in the state competing with each other, instead of the great number of incompetent and useless agencies, many of whom care for nothing, and who have no regard for the industry except to get just their commission, we could have an ideal situation, just as they have in California. There has been enough said and written and shown that one would think that at least the growers would wake up, but so far it has seemed useless.

I would love to see the day when we could do away with all this artificial early maturing of fruit, the "gassing" of fruit, the "adding color," the tampering with fruit in one way or another, and everything else that is being done to unnaturally and artificially keep nature from properly and naturally taking its course. Last year, after the end of the season, after our disastrous cold winter, and after an estimated seventy per cent of our crop was damaged, it was proudly published that, even with the freezes we had had, more fruit was shipped out of the

state than the season before, bragging about shipping frozen fruit. And last season, to the frozen fruit and the damaged fruit, and the fruit of all kinds of inferior grades, the "color was added" etc., and of course the buyers in the markets did not know what they were getting, so that the high-class trade who have always bought Florida Valencias got disgusted and switched over to California entirely, leaving the lower class trade to buy our fruit, and leaving the Florida growers with no markets for our Valencias.

I have about 170 acres in bearing grove, and during last winter I spent some \$4,000 buying wood and firing my groves to protect my trees and fruit, and then held my crop to be sure that it was undamaged, after which I finally shipped into the markets and had to compete with all the frozen, bad and injured fruit, and of course got nothing for my crop. I would of course have been much further ahead had I saved my \$4,000. If it were not for the fact that I have had income from other sources I would have lost my grove long ago.

It is not far from dishonest, it is almost a crime, to gas fruit for early coloring and to "add color" to inferior grades of fruit, because we are trying to make our product appear as something that in reality it is not. And now we have been busy discussing and approving a third grade for fruit. Why not a fourth grade? And a fifth grade? And a sixth grade? Why have any grade? As Joe Lyons says: "Why don't they talk about the first grade some?" As I have stated before, if all the growers of our state would visit our big auction markets as I did, and especially the New York market, they would realize what the trouble with our fruit situation is. It would make an everlasting impression, an indelible one, upon every grower who could view our so-called graded fruit as shipped up there and displayed for sale, where it is clearly demonstrated that the growers in general will never get any reasonable profit for their fruit until the main trouble is corrected, namely: to produce fruit of first-grade quality and ship it up there in a standard uniform grade and pack, and stop shipping all

(Continued on page 16)

New Frost Forecasting Service For Florida

DR. WILMON NEWELL, DIRECTOR, FLORIDA AGRICULTURAL
EXPERIMENT STATION

An improved freeze and frost forecasting service for Florida has been made possible by the allotment of \$15,000.00 out of a Congressional appropriation to the United States Weather Bureau and by an appropriation of \$10,000.00 per annum by the last Florida legislature for the same purpose.

These two funds will be used under a plan of close cooperation between the United States Weather Bureau and the Florida Experiment Station.

The Weather Bureau has transferred to Florida, to have charge of this forecasting service, Mr. E. S. Ellison, Meteorologist, who has for the past fourteen years very successfully handled freeze and frost forecasting service for the growers in southern California. The State Board of Control has also appointed Mr. Ellison as Meteorologist on the staff of the Florida Experiment Station.

The new forecasting service will be gotten under way about November 15 and, as explained by Mr. Ellison at a conference of leading growers and shipping organizations at Winter Haven on September 12, will consist essentially of four important phases.

The first phase will consist of temperature survey work, involving for this year the location and establishment of some 120 official temperature recording stations in addition to recording stations already being operated by the Weather Bureau in the state. At each one of these stations there will be placed an accurate recording thermometer and arrangements made for its daily reading. Another feature of the survey work will consist in determining the variations in minimum temperatures in various parts of a community and definitely delimiting the areas in which various fruits or crops can be grown without extensive freeze hazard. The forecasts will be made for "key" stations in each locality and by knowing the usual difference in temperature readings between his grove and that of the key station the grower will be able to know what temperature to expect in his own planting.

The second phase of the work will consist of daily forecasts as to the probable occurrence of frosts or freezing temperatures. These will be

made each day about noon in Mr. Ellison's office at Lakeland, where the state headquarters for this service have been established. The daily forecasts will be based upon weather conditions throughout the country in general, as well as upon the various meteorological records received by wire and telephone from the observing stations in Florida.

These forecasts will be given the widest possible distribution. They will be given to the press; they will be wired to county agent offices and other central locations where they may be consulted by the growers and, in event dangerous temperatures are anticipated, the forecasts will be repeated frequently over one or more radio stations. It will be possible for commercial organizations and growers to secure these forecasts by special telegram by paying the charges thereon. The forecasts will also undertake to indicate the probable duration of dangerously low temperatures.

The third phase of this service will consist in professional advice and services to the growers themselves. The Weather Bureau will undertake to warn growers against certain unsound and ineffective practices and equipment in freeze protection. Included in the service will be the testing for growers of their thermometers in order to insure their accuracy. Mr. Ellison has pointed out that the use of accurate thermometers by the grower saves money both ways: If a thermometer reads too low the grower may spend a lot of money unnecessarily in heating or otherwise protecting his crop, whereas if his thermometer reads too high he may fail to take proper precautions and suffer severe frost damage. The great majority of thermometers now in use by growers are not accurate. Mr. Ellison is prepared to indicate the sources from which accurate thermometers can be purchased. These thermometers should also have proper shelters in the locations in which they are placed. This information also will be obtainable from Mr. Ellison's office in Lakeland. Growers may also consult him in connection with their purchase of special equipment, such as grove heaters. Mr. Ellison, of course, will not advise a grower to purchase any particular make of heater, but where certain types have

been found inefficient he will not hesitate to say so.

A fourth phase of the forecasting service will consist of research work which will include experiments to determine the critical minimum temperatures for various fruits and vegetables under Florida conditions. This research will also go into the rather technical field of temperature inversion, or conditions in which there is a wide variation in temperatures between the ground surface or crop to be protected and the atmosphere some distance above it. An intensive study of detailed data, such as will be secured by the new observation stations, will be made with a view to improving the forecasting service.

In addition to the service headquarters at Lakeland some four or five meteorologists will be located at strategic points through the fruit and vegetable sections during the coming winter season, these men rendering in their respective localities the various types of service which we have just outlined.

Mr. Ellison wishes to point out particularly at this time that this service is an entirely new venture in Florida and that some experience is going to be necessary before it can be made as highly efficient as it is in other areas where several years of records, observations and experience are available.

HISTORY OF CITRUS CULTURE IN FLORIDA

(Continued from page 5)

there are many mulberries from the mulberry trees produced in this same soil, vegetables and greens in large quantities, such as beans, kidney beans, melons, pumpkins, lettuce, cardoons, onions and garlic; all of these in abundance, in such manner that I assure your Highness that if there were those who would farm the land, it is ready for it."

The earlier presence of oranges on the southeastern coast land of what is now the United States, is indicated in a letter written in 1577 by Bartolome Martinez to the Spanish King from Santa Elena, in which the following sentences occur:

"I planted with my own hands grape vines, pomegranate trees,

orange and fig trees; wheat, barley, onions and garlic. All the vegetables which grow in Spain were raised in the fort."

(Santa Elena was located on the coast of South Carolina in the southeastern portion of the state.)

From these statements it will be seen that the culture of oranges in Florida and in adjacent areas to the northward had been undertaken very shortly after the beginning of the Spanish occupancy. A century or so later citrus culture was well advanced in the state, particularly along the upper and central east coast and along the St. Johns River. Bartram, in his delightfully interesting book, "Travels through North and South Carolina, Georgia, East and West Florida, etc.," makes numerous references to orange trees growing at different places along the St. Johns River. Likewise, when he was there about 1771, he noted "a famous orange grove, the upper of South promontory of a ridge, nearly half a mile wide, and stretching North about forty miles, to the head of the North branch of the Musquito, to where the Tomoko river unites with it, nearly parallel to the sea coast, and not above two miles across to the sea beach. All this ridge was then one entire orange grove, with live oaks, magnolias, palms, red bays, and others."

At an early date orange plantings were made at Mandarin. It was an important production center as early as the 1830's and the growing of citrus fruits at the point has been continuous ever since the first plantings were made. Probably the first large commercial development was in and about St. Augustine and plantings there were in flourishing condition when Florida passed to the United States in 1821. During the shipping seasons prior to 1835 the port of St. Augustine was a busy place with vessels, fifteen to twenty at a time, loading with fruit for coast markets farther north — Charleston, Baltimore, Philadelphia, New York, and Boston. On February 9, 1835, frost severely damaged the St. Augustine groves and today the industry has disappeared from the city.

There is no evidence that any of the citrus fruits are native in the Western Hemisphere. The sour orange, sweet orange, citron and the lemon were brought to Florida from the gardens and groves of Europe by the Spaniards. It is also probable that they brought the lime to America. Fruits produced at St. Augustine or at other points in eastern Florida were carried by Spanish explorers

and by the Indians on journeys into other parts of the state. These journeys were often, and perhaps mainly, made by water. Seeds were dropped and the fruits were eaten on shores of lakes and the banks of rivers. For the most part these were sour orange seeds but there were also sweet oranges and lemons. In due time citrus thickets were formed in which sour oranges predominated because they are the hardier trees, and the early settlers found and topworked later. These were the beginnings of Florida's budded groves. There are citrus plantings in Florida today, some with trees scattered here and there in irregular fashion, the roots of which are original stocks from these wild plantings of long ago. Even now, so remote from the time of their introduction, the sour orange, rough lemon and lime are feral trees here and there within the state.

To Europeans and to many others, grapefruit (*Citrus paradisi* Macf.) was unknown up to the end of the Spanish Florida occupancy. The earlier European writers on citrus — Ferrari, Volcamero, Gallescio, Sterbeek, Risso and Poiteau and others — make no mention of it in their writings. Moreover, it is only within very recent years that grapefruit trees have been growing in the European citrus area. Apparently no citrus fruit exactly like grapefruit as we understand it has been found in China and adjoining areas in the southeastern portion of Asia, in which citrus fruits are native. It is not cultivated in that region except as a tree introduced in recent years. Grapefruit has long been confused with the Shaddock (*Citrus maxima* Merrill) by botanists and horticulturists. That the two are closely related is unquestioned, but from the Shaddock the grapefruit is specifically distinct. The history of the Shaddock in America indicated that it was brought to the Barbados Islands from the Orient some time previous to 1750 by Captain Shaddock, an East Indian sea captain. It will be remembered that the Barbados Islands belong to Great Britain and unquestionably the Shaddock soon after its introduction was distributed throughout the other British possessions in the West Indies. In descriptions of the horticulture and flora of the West Indies and Jamaica in particular the first references in literature to grapefruit as we understand it are found. There is much to support the assumption that grapefruit as such was first recognized in Jamaica and that it originated there. How it came into existence is unknown,

but the assumption that it is a mutant from the Shaddock is not an unreasonable one. So far as has been determined up to this time the first grapefruit trees in Florida were raised from seeds planted at Green Springs, in what is now Pinellas County, by Don Philippe. He had come from the West Indies and had brought seeds or fruit with him. One of the original trees from this source was still living in 1925. It will thus be seen that the West Indies played an important part in the beginnings of Florida's citrus culture.

The first of the Mandarin oranges (*Citrus nobilis* and its varieties) to come to America apparently came from Europe, particularly England, to northern nurserymen and thence to Florida. Introduction was also direct from the Orient to Louisiana and then to Florida. Others of this group came to California and thence to Florida, while the Satsuma came from Japan to Florida direct, although the fruit is without doubt of Chinese origin. All of these introductions have taken place within comparatively recent years.

Kumquats (*Fortunella*) in three species came to Florida either direct or partly by way of Europe. Robert Fortune introduced one of them into England in 1846 and it is recorded that very shortly after that date Nagami was brought to America.

Transportation in Florida except by water was exceedingly difficult in the earlier days. For this reason, the early development of citrus culture as a horticultural industry took place at various points along the upper East Coast of the state, between St. Augustine and New Smyrna and ad-

(Continued on page 20)

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WILL FLORIDA GROWERS EVER LEARN?

Citrus Growers
Attention is called to a letter under the above caption written by Mr. Joe Knight of San Souci Groves, Elfers, Fla., and published on the "Growers' Own Page" in this issue of The Citrus Industry.

In discussing the citrus situation in Florida, Mr. Knight makes use of some very plain, and in some instances, rather strong language, which, however, seems justified under the circumstances.

The gist of Mr. Knight's argument for the betterment of conditions in the citrus industry of the state, is that growers themselves have the solution of their problems in their own hands if only they will sell and ship nothing but high grade, tree-ripened fruit. His arguments against "gassing" and "coloring" fruit are based upon the danger of these practices being abused through use upon unripe or low grade fruit.

Mr. Knight's contention that only fully ripened, high grade fruit should be shipped will appeal to the good sense of every grower. If such a system were in actual practice, the marketing problems of Florida citrus growers would be reduced to the minimum, and they could devote their time and attention to the production of quality fruit. This contention is right in with the doctrine preached by this publication from its very inception, and we have no hesitancy in giving fullest endorsement to Mr. Knight's arguments for complete abandonment of the practice of shipping immature or low quality fruit. Thus only will Florida growers ever achieve the full measure of success and profit.

ADVERTISING FLORIDA CITRUS

Citrus Fruit Industry & Trade, Advertiser
The Florida Citrus Control Commission has come in for a considerable degree of criticism for its action in placing the advertising of Florida citrus fruits with an out-of-state advertising agency. This criticism has come from a portion of the Florida press, from members of the state legislature and from certain growers of citrus fruits. So far as The Citrus Industry knows, there has been no criticism of the agency selected — the objections are based upon the belief

that the contract should have gone to an established Florida agency as directed by the legislative act creating the Control Commission and providing for the creation of the advertising fund.

The Citrus Industry cannot but feel that this criticism is in large measure merited. Citrus being by far Florida's major industry, it would seem that the advertising of citrus fruits should have been placed with some Florida agency which has a vital interest in the industry aside from the commissions which might be earned under its contract. That this was the thought of the legislators who enacted the bill is shown by the fact that the law carries a provision that the advertising fund should be spent under the direction of an established Florida agency. That the Commission has seen fit to disregard this provision opens the door for criticism.

Entirely aside from the legal aspect of the case, it would seem that justice and interest in the industry should have shown the wisdom of placing the contract with some state agency closely affiliated with the industry and acquainted with the needs and requirements of the industry in placing the merits of Florida citrus fruits before the ultimate consumers.

The agency selected may do everything expected of it. The Citrus Industry cannot escape the belief that a Florida agency could have done as well — or better. *Commerce, Export Trade*

GOVERNMENT MAY AID EXPORTS

A plan for federal aid to Florida citrus growers in stimulation of export shipments of surplus citrus fruits is being considered by citrus interests of the state. Federal legislation intended to encourage exports of agricultural products may be applied to citrus fruits under certain conditions outlined by the Department of Agriculture.


In order to secure the benefits of such legislation it would be necessary for Florida growers and shippers to effect a marketing agreement with an established commission of some kind to deal with the Department of Agriculture in furthering the plans contemplated under the new legislative act. The legislation provides that funds will be advanced by the federal government to meet the difference between prices received for fruit thus exported and the prices received on the domestic markets. A further provision is that the government would purchase outright surplus supplies of citrus for distribution to persons on relief rolls.

Florida citrus interests are making a careful study of the plans provided by the Federal legislation with a view to working out some feasible means of making them apply to the handling, distribution and exportation of Florida's surplus citrus fruits.

One car of unripe citrus fruit will spoil the sale of a hundred cars of good fruit shipped later in the season.

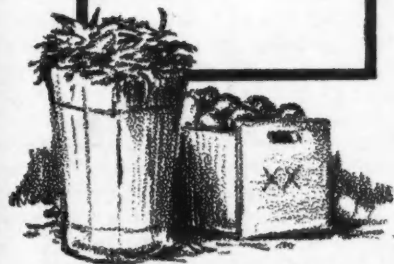
If your grove is not producing quality fruit, it is not only losing money for you, but it is also acting as a handicap for your neighbor whose grove is producing fruit of quality.

REGARDLESS of PRICE or ANALYSIS COMPARE RESULTS

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IMPRESSIONS

.. By ..

Frank Kay Anderson

Charley Searcy of Longwood tells of a recent incident wherein two culprits serving time on the county "gang" became involved in an altercation. Fearing trouble the guard broke up the squabble and was separating the pair when one struck an attitude and said: "But before I go I want to get one thing over to that so and so. I've served time seven times before, this is my eighth stretch on this gang; but every time it has been for fightin', and never once for stealin'."

Much pother about the hurricane of September 28, which failed to connect with Florida; and Bishop Wing of the Episcopal church telling of his indignation when a couple of years or so ago he was on a trip up East and a hurricane which hadn't come within four hundred miles of Florida struck the Jersey coast inflicting large damage; and he had to read newspaper headlines there, "Florida Hurricane Strikes Jersey Coast."

Mentioning which brings to mind that as this is being written Dr. J. G. Glass of Ormond, who once was quite active in Exchange circles when he owned that big grove up on Lake Weir, with his good wife is on the Atlantic homeward bound from England. His Ormond parishoners gave them the trip this summer as an expression of esteem.

In Edinburgh, Scotland, this past summer in a swagger restaurant on Princess St., Miss Becky Caldwell of Lake Wales, yeah Tom's sister, encountered the item of "Grapefruit Florida 6d," on the menu. It proved to be a cocktail glass full of grapefruit hearts; and then search in the kitchens brought forth the label of the Highland Canning Co., Highland City, Polk County, Florida, which on an air line would be just about twenty miles from the Caldwell home. 6d, or twelve cents U. S. A. money, is pretty reasonable as compared to our own normal restaurant charges.

Mrs. Colonel, or is it Colonel Mrs. Holderman — we always have trouble with that — the well known Co-

coa publisher in her editorial columns does a first class job of standing ag-hast recently. All over the discovery that the Jacksonville Union Station dining room sells orange juice at twenty cents per glass. Probably part of the Jacksonville scheme of financing those bonds for the cross-state canal.

E. F. Miller of the National Fruit and Vegetable Exchange recently making an extended stay in Florida, and visiting about for a look-see over the fruit and vegetable sections. Part of the time traveling about under the chaperonage of Perry N. Whitehurst of the Standard Growers Assn. of Sanford, and partly wandering about on his own.

Bronson C. Skinner of Dunedin rises up indignant to inquire just what constitutes a transport plane, we having mentioned that W. H. (Bill) Mouser had journeyed to and from the Apple Convention by that form of transportation. Seems the truth of the matter is that Bill hitch-hiked to and from the convention, traveling in the Skinner plane and not being bothered with the formality of buying tickets. So! Bill Mouser has added aerial hitch-hiking to his other well known accomplishments, eh?

Lorenzo A. Wilson and Earl W. Brown out visiting over the parish in behalf of the Florida Exhibit to be held at Radio City in New York this winter; and receiving a lot of encouragement. The fact that the same crew all through is devising and perfecting the exhibit which functioned to make the Chicago exhibit the greatest thing of its kind ever does much to create enthusiasm for this forthcoming effort. With an average attendance of 60,000 persons daily traveling through Radio City with the regular guides, the exhibit there ought to be worth while even if no New Yorkers should come out to see it, which hardly is to be imagined.

George Clements doing the publicity for this Radio City effort. If he does one-half the job he did at Chicago, all of us here in Florida will

be in his debt. A meeting with George on the street in Sanford, and he is looking just a bit younger and better than he did fifteen years ago. At 106 George is a much better man physically than when he was publisher of the St. Louis Star something less than forty years ago. Figured upon the basis that the good die young, we believe George still has a long and useful life ahead of him.

Just as we write these lines we are all in a dither. Here's a communication from Fred E. (Pinky) Godfrey of Orlando. He wants us to play in a golf tournament. We can't do that because there are so few golfers in our own class — we use only one club, a midiron; but one portion of the communication interests us exceedingly. It says: "Please note the enclosed invitation to a beer and shrimp party at the San Jaun Hotel, 8:00 p. m., Tuesday, October 22nd, which is being sponsored complimentary for members and friends of members jointly and personally by Messrs. Lawrence Gentile, W. H. Mouser, Chester Fosgate, C. C. Commander, R. B. Woolfolk, Howard Phillips, I. N. Burman, and E. M. Asher." Yet search as we may there is no such invitation enclosed. Shall we stay at home or crash the gate? Somehow we feel they are going to need an old experienced shrimp-picker like us to make that a success.

Getting up one morning we felt pretty pessimistic, so on sallying forth we wore both suspenders and a belt. Riding down the road we removed our coat, leaving our last-Christmas-gift-galluses pretty conspicuous. We saw a hitch-hiker ahead. At a distance he looked fairly good, so we picked him up. On close acquaintance, however, he didn't look good at all. A hard-boiled baby if ever we saw one. And just about the nosiest guy ever. As full of questions as a four-year-old, and his manners not the best. Something inside us kind of clicked, so we hazarded an experiment. We said something derogatory of the world at large, and he came right back enthusiastically. We indicated a lack of regard for our Gov-

October, 1935

ernor and state institutions, and he responded most cordially. Then we went further and took in a little more territory, and he proceeded to outdo us most thoroughly. It must have been our galluses which inspired his confidence to us. Before he dropped out a bit further down the road he left us, unsolicited, a memorandum of his name and address, desiring to hear from us. Several days later, contacting a man who ought to know something about such things, we handed him the hitch-hiker's memorandum and inquired if he knew anything of him. "Sure," he said, "that is So-and-so; that is one of his aliases. He also is known as So-and-so. He makes his headquarters at Blank and lives at Blankville. He claims to be 'organizing' citrus and vegetable workers into unions; but the American Federation of Labor and other legitimate labor organizations disown him. As a matter of fact he is part and parcel of the Communist party's working forces. We had our eyes on him and a few of his choicest associates for quite some time."

Converted to the idea that galluses are confidence builders, we are now wearing them as regular equipment.

Latt Maxcy of Frostproof says that according to his latest information Latt Maxcy of the Everglades is all right and in excellent health. Latt Maxcy of the Everglades is a Seminole Indian boy, now about fourteen years old, whom a grateful father named for the Frostproof packer while the latter was on a camp hunt down in the 'glades.

John H. Treadwell, who is advocating a single state citrus marketing outlet to be prescribed by law, and Chester B. Treadway, the grower chairman of the state road department, should not be confused. The lair of the Treadwells is round about Arcadia, while the Treadway home port is Tavares.

Suddenly we stumble upon what is apparently authentic evidence that the most successful orange juice concern is located in Philadelphia. Buying oranges from several sources the concern expresses the juice and sells it from headquarters in the Quaker City. Seemingly it enjoys the largest volume of business of any such concern.

Railroad statement to the Interstate Commerce Commission places the estimated losses of the rail lines in gross revenue on the 1934-

THE CITRUS INDUSTRY

35 citrus crop, due to that portion of the crop which did NOT move by rail, at \$8,100,000. That is a pretty fair slice of money in almost any circle.

A Floridian wrote to "Time" in New York as follows: "Two years ago I had a puppy whose mother was a police dog and whose father was a pit bulldog. At times his ears would stand straight up and his coat would be shiny and smooth. At other times his ears would droop and his coat would become coarse and rough. One day, it happened just then that his ears were down, we fed him some canned grapefruit and found he liked it. Next day his ears stood up, and shortly his coat got silky and smooth. We gave him no grapefruit for several days; and found that his ears drooped and his coat got rough again. So again we fed him grapefruit and his ears picked up and his coat got shiny again. We carried out this experiment eight times, and each time the results were the same." Major Edward T. Keenan of Frostproof, having thus written sat down awaiting the appearance of his article in "Time." Instead one day he got from the mail the return of what he had written, with enclosure without remarks of "Time's" advertising rate card.

Personally we cannot understand anyone with grapefruit being in a hurry to market it this season. Some shippers tell us our own estimate of nine millions of boxes left is too high; that just about eight million boxes is all they can figure. Now if the canneries use a minimum of three million boxes, and how can they use less and hold their trade, that leaves only five millions of boxes. In view of the past average consumption of grapefruit that should not be enough to go around. Only lack of the consuming public's ability to pay high prices, to our mind, prevents the possibility of grapefruit going sky-high, if only marketed deliberately.

Yet those growers who cut back thousands of grapefruit trees not so long ago and rebudded them to other things do not seem to be worrying over their lack of judgment. Once that cross-state canal is opened and competitors to the westward obtain much reduced rates on their grapefruit to the Atlantic seaboard, there is still due to be too much grapefruit acreage in Florida, in the judgment of marketing sharks, when the now curtailed producing power of the trees returns to normal.

Thirteen

However, there are plenty of visible signs that numerous citrus interests are, with both manpower and money, reinforcing the Central and South Florida Water Conservation Committee, with headquarters at Sanford; and apparently the movement started by the flowing well farmers is growing like a green bay tree, with prospects that the pathway of the ditch diggers may not be so easy.

A very large citrus grower recently said to us, "I have just been up to Sanford and looked over that Water Committee's layout and checked its activities. I chipped fifty dollars into the pot to help the move along. I'm no geologist, but I am wholly convinced it will be utterly impossible to cut the canal from Ocala to the Gulf without taking a slice, like a slice of pie, out of the Ocala limestone from top to bottom. That slice, so to speak, will be 250 feet thick at the bottom and 850 feet thick at the top. In as much as all the published geological studies since 1908 show the bulk of the underground water that supplies our farm wells and municipalities in South Florida travels in streams through cavities in that Ocala limestone, it seems to me that slice to be taken out

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Agricultural Advertising
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Serving some of the South's foremost businesses.

cannot fail to interrupt the flow of those streams, and either to stop the flow or give us salt water in the place of fresh. One other thing is certain, that the water table of lands south of the canal for a very long way is going to be lowered tremendously. After investigation I feel that if the possible results were being checked by the regular government geologists, whose decisions would not be influenced by fees, and whose continuity of employment would not be affected by the nature of their decisions, the thing would end quickly. I believe the Water Committee in the long run will develop enough strength to force that sort of investigation. If it doesn't come fairly quickly, I have a hunch this canal will prove to be a sort of second Teapot Dome."

Now that is putting it pretty strongly, but conviction seems to be growing rapidly that the Central and South Florida Water Conservation Committee, inaugurated by the long established Seminole County Agricultural Assn., but now comprising a membership from many other interested sections, is a very scrappy outfit with abundant ammunition of facts.

There are something like five thousand flowing wells supplying water for the celery production of the Sanford-Oviedo section, which accounts in part for the initial activity in this water conservation originating there. Add the flowing wells of Manatee and Sarasota counties, and similar areas along the East Coast, and there's a lot of direct interest. Then when it

develops that over eighty cities and towns in South Florida derive their municipal supplies from the same Ocala limestone formation, not to speak of the private wells of the farms all over the highlands, maybe the gentleman is right in believing the strength of the opposition is due to enlarge muchly.

With new marketing agencies continuing to enter the field, Florida citrus marketing certainly is becoming no less complex.

Rumors afloat that the Florida Citrus Growers League, the "Simon pure growers" organization of a couple of years back, is due for a revival, perhaps under a new and less confusing name; but no one willing to make any positive statement nor to authorize the use of his name.

As time has passed since earlier writings herein, we have reached a decision. Any recalling a dull and heavy thud from the vicinity of Orlando on the night of October 22 may explain it as the sound of us being thrown out of that shrimp party, for having arrived without the invitation.

STATE CITRUS GROWERS NOW BEGINNING SIXTH YEAR OF RECORD WORK

The fifth year of citrus accounts and records sponsored by the Agricultural Economics Department of the State Agricultural Extension Service is closing and another one is opening, says R. H. Howard, assistant

economist. Over 300 growers have cooperated in the records this year, and Mr. Howard says that a summary of their reports will be issued about the first of January.

This economic study of Florida citrus groves, in which growers of several counties have voluntarily cooperated, has resulted in considerable information being gleaned about economical grove practices and has enabled growers as a whole to decrease their costs and increase their returns, Mr. Howard says.

Record books prepared especially for the project, and containing blanks for keeping accounts of value to the growers as well as useful in the study, may be obtained from the office of the county agent, Mr. Howard points out.

Citrus growers should systematically inspect their groves every week to determine whether their trees are being attacked by rust mites, says Entomologist J. R. Watson, of the Experiment Station. This will enable the grower to begin control operations in time to prevent serious damage by these pests.

Ants may be eliminated from seedbeds by inserting carbon bisulphide into every ant hill within 75 feet of the seedbed. In distributing this material, the grower should make a hole in the nest with a sharp stick and then insert the carbon bisulphide, a little in each hole.

Winter grass best suited for lawn conditions is Italian rye grass.

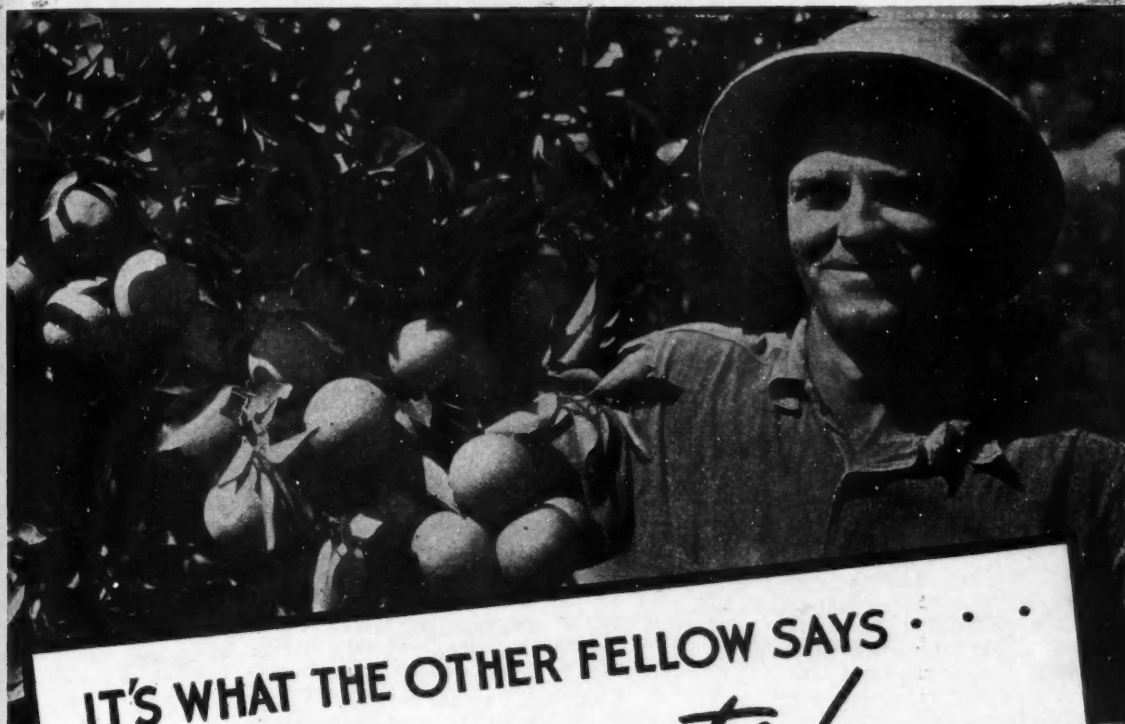
Use **GRANULAR 'AERO' CYANAMID**
ON YOUR GROVES *this Fall*
APPLY JUST PRIOR TO DISCING IN YOUR COVER CROP



The soil bacteria, fed with the nitrogen and stimulated by the lime of 'Aero' Cyanamid, bring about the rapid decay of the cover crop, transforming it into a product having the same effect as animal manure.

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IT'S WHAT THE OTHER FELLOW SAYS . . .
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★ IT'S ONLY NATURAL for a manufacturer to praise his own product. But, after all, it's what the buyer thinks and says that really counts.

If you will take the trouble to inquire you'll find hundreds of outstanding growers eager to say a good word for Gulf Fertilizers and Gulf Field Service. Why? Because year in and year out Gulf Brands have helped them to grow quality crops economically.

Gulf Brands are known as "Friendly Fertilizers" because their reaction in the soil is friendly and non-toxic. Made expressly for Florida soils they contain correct proportions of essential plant foods — each derived from carefully selected materials. And Gulf Field Service means year round farm and grove inspection at no extra cost — dependable advice about pest and disease control, cultural methods and fertilization practices. Start now with Gulf Fertilizers and Gulf Field Service. Then watch the difference in your crops.



THE GULF FERTILIZER COMPANY

36th Street, South of East Broadway, Tampa, Florida

WILL THE FLORIDA GROWERS EVER LEARN?

(Continued from page 7)

this miserable, practically unsellable low-grade fruit to market. And if this is not realized the situation will have to remain hopeless, and it will have to continue as a situation of "The Survival of the Fittest."

The auction companies and buyers there are all our friends, our partners in business. They want to keep the markets up, not down. It keeps the shyster buyer from getting a monopoly on the market. They want to co-operate with us, but we will not co-operate with them. But we are always quick and ready to find fault with the markets and everything in connection with them, except our own selves. Our grades of fruit generally bring all that the fruit is worth, if not more. I cannot see how some of the fruit that is sent up to market ever sells at all, for any price. The shippers shipping this miserable grade of fruit are a disgrace to the decent growers, the citrus industry and the state of Florida. Buyers in the markets are all begging for good fruit. Good quality products are always in demand. There has hardly been a day during our shipping seasons, no matter how low or bad our markets may have been at the time, but what there was some fruit of good quality of a uniform grade and pack that sold for high prices or enough to net a very fair and reasonable profit.

It is easy to sell fruit on high markets or when conditions are abnormal, etc., but in this day and time the real product will have to be shipped. Never try to fool the markets by our present performances and some of the methods that are being used. First, it is dishonest and unfair; and second, we are only fooling ourselves and hurting our own

THE CITRUS INDUSTRY

situation, and certainly not fooling the buyers in the markets. To view the nicely arranged all uniformly graded fruit, as a whole, on display from California, and then the contrast, after viewing the Florida fruit of a conglomerated mess of fruit grades of all kinds and character, was so disgusting, shameful, pitiful, I did not feel like mentioning the fact that I was a Florida grower. I was ashamed of our product as a whole.

It is about time, away past time, that something be done about the fruit situation in Florida and some of the present methods now being used by our growers and shippers, and the talk of over-production of fruit. If there is an over-production of anything it is automobiles, but if the automobile industry were operated anything like our citrus business there would be no automobile industry.

It does seem that out of a personnel of some 13,000 growers that enough business sense could be gotten together to try to instill into the Florida growers that they must co-operate, must adjust and correct themselves and their methods and that they must go along with California. The shipping of green and immature fruit is almost a crime. If the growers would only wait a month or two longer at the start of each shipping season until our fruit could naturally mature and color on the tree and perform properly and naturally, we could do away with nine-tenths of our foolish and unnecessary operations, citrus commissions, bureaus of state fruit inspections, fruit testing, any kind of testing and government inspection, etc. All we have to do is to be patient and let nature take its course. It will be just as easy to wait until, say December, as it is to try to ship in August or September, and it will not make any difference — the markets will still be there waiting for the fruit. How simple this would be, and how helpful and beneficial to our state and all concerned.

During last fruit season Mr. Lowell Thomas, our eminent radio talker, who had given me a standing order to supply him with fruit each month, wrote me and advised that he enjoyed the fruit but would like to know if it were possible to get a box of fruit that had not been tampered with in any way. I advised Mr. Thomas that the fruit I had been sending him had not been tampered with but was simply naturally tree-ripened, matured and colored right on the tree. He wrote back and said

that he was certainly delighted to hear it and took great pleasure in enclosing his check to pay the bill. This is simply an illustration of how these things are felt by our consumers and buyers over the country. And this is not the first time I have heard these comments.

We have no inalienable right to artificially add color to our fruit to try to make it appear like that of California's naturally colored fruit. We have the natural high juice content in our fruit that California's fruit mostly lacks, which more than makes up for our so-called lack of color, and if we would raise good fruit and grade it and pack it as it naturally is, its true worth would appear on the markets and buyers would know just what they were getting, just what to expect, and would pay for the fruit what it was worth. I wish that there could be a reliable marketing and shipping agency in the state that would not tolerate the tampering with their fruit in any form of any kind or character — I would like to join the organization.

Volusia county's 10 4-H girls' clubs have been reorganized, a new club has been formed at Osteen, and eight senior home demonstration clubs have been reorganized, Miss Marguerite Norton, home agent, says.

FOR SALE

Lists of Florida Citrus Growers compiled from recent survey of groves, arranged by counties. Name, address, acreage and legal description.

Also list wealthy residents of Florida.

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Send me sketch, picture, or model of your new invention. I will give you prompt report on its probable patentability based on a search of the patent records for a small charge.

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WHAT YOU DO IN THE FALL DETERMINES WHAT YOU HAVE IN THE SPRING

VERY soon, now, your citrus trees will be entering a "resting period"—the ideal time for the Fall Fertilizer Application. This application is essentially a *foundation feeding*, for it governs the extent and nature of your spring bloom. And it enables the roots to store up energy, so that your groves will come through the trials of winter in healthy condition.

But the roots cannot of themselves continually find in the soil enough of the plant foods or elements required to build up resistance and to provide a reserve supply of spring food. It is up to you to see that the proper plant foods *are placed there* (through fertilization) for the roots to utilize.

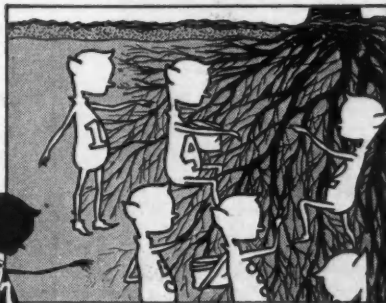
When you make Armour's Big Crop Fertilizer available to your trees, you assure them a well-balanced ration of the major plant foods plus minor and secondary plant foods, elements that are essential to plant growth just as vitamins are to humans.

- Discuss "Foundation Feeding" with One of Our Field Service Staff.

An invitation for our representative to call and analyze your grove fertilizer requirements will place you under no obligation.



For two score years, outstanding Florida growers have found it pays to use Armour's, the fertilizer with the Seven Active Plant Foods—for their citrus and truck crops.



The Seven Active Plant Foods

*Fall finds all "Seven" busy,
Storing energy in the roots,
To protect your trees through winter
And assure you better fruits.*

ARMOUR FERTILIZER WORKS, JACKSONVILLE, FLA.

SOILS SUITED TO CITRUS IN FLORIDA

(Continued from page 6)
cold injury more than the mineral soil and thus increase the element of risk for citrus.

It is rather significant and interesting to note that the most extensive soil types in the Florida peninsula, namely Leon sands and fine sands are not adapted to citrus production. This is due primarily to their low

THE CITRUS INDUSTRY

October, 1935

Prices Received By Growers For Oranges and Grapefruit, 1934 Crop, and Peaches, 1935 Crop

Estimates of prices received by growers for the 1934 crop of oranges and grapefruit in Florida, and for the 1935 crop of peaches in States where grown were issued by the Crop Reporting Board.

Returns to the growers for oranges in Florida at \$1.53 were higher by 2 cents a box in the 1934-35 marketing season than in the previous season, principally as the result of a narrowing in the spread between prices received by growers and prices on the loading auction markets, due to relatively greater shipments by boat rather than by rail. On the other hand, the average price of 78 cents a box which Florida growers received for grapefruit in 1934 is 39 cents less than they received in 1933. This

sharp decline in price was due mainly to the unusually large production of Florida grapefruit in 1934 of 15,200,000 boxes, 42 per cent larger than the production in 1933 and 30 per cent larger than the 1928 to 1932 average.

Oranges and Grapefruit, Florida;

Prices per box * received by growers for the crops of 1933-34

	1933	1934
Oranges	Dol.	Dol.
All	1.51	1.53
Commercial	1.58	1.60
Grapefruit		
All	1.17	.78
Commercial	1.45	1.09

* Local market prices for packed boxes less selling charges on the com-

(Continued on Page 19)

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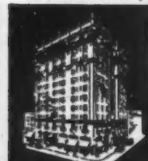
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The Wonder Hotel of the South. Radio and every known facility for first class operation.
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195 Rooms. Bath
You'll be pleased with its convenience, comfort and service. Modest prices prevail.
GARAGE directly connected.
RATES...\$1.00 and up



WEST PALM BEACH



The GEORGE WASHINGTON

200 Rooms with Baths and Showers
Open all the year. Radio and every modern convenience and service for summer and winter comfort.
RATES \$2.00 and up. GARAGE service.

ROBERT KLOEPPPEL OWNER

elevation subjecting them to cold injury and to the presence of a hardpan in the subsoil which retards root development. Most attempts to grow citrus on these soils have been failures. The St. Johns fine sand and also Plummer fine sand are rather extensive in certain areas, but they are low and not suited to citrus, except in very limited areas.

Thus it may be seen that soil types suited to citrus production are confined largely to the uplands, commonly known as the ridge section and those low-lying areas having ample water protection. Of the upland soil, the Norfolk types because of their elevation, friable nature of the subsoil and air drainage are the most extensively grown to citrus, in spite of the fact that they are inherently not as fertile as some other types. In the main these soils are located in the lake region which further mod-

erate the temperatures.

Citrus is also successfully grown on the Orlando, Gainesville, Eustis, Hernando, Lakewood and Dade soils and also on the Parkwood, Fellowship, Scranton, Bladen and Portsmouth soils when drained and protected from cold. If these broad principles of adaptation are taken into consideration in the planting of citrus a goodly portion of the element of risk involved in growing this crop will be avoided.

HAYFEVER

ASTHMA and SUMMER COLDS are unnecessary. Complete relief only \$1 Postpaid. Nothing else to buy. Over 40,000 HOLFORD'S WONDER INHALER sold last year alone. Mail \$1 today for full season's relief from THE DANDEE CO., 252 Hennepin Ave., MINNEAPOLIS, MINN., or write for Free Booklet.

PERRINE LEMON TREES

From nurseries of the Largest Lemon Grove in Florida. 150 acres already planted with 330 acres more in preparation. A limited amount of 1/2' to 3/4' caliper. Scientifically grown trees, identical with our own planting. Original buds from trees of record production, on vigorous 3 year root stock of Rough Lemon, which is the natural affinity for the Perrine Lemon.

BREEZY POINT GROVES, INC.
BABSON PARK, FLORIDA

October, 1935

THE CITRUS INDUSTRY

Nineteen

PRICES RECEIVED BY GROWERS
FOR ORANGES AND GRAPE-
FRUIT, 1934 CROP, AND PEACHES

(Continued from Page 18)

mercial crop and bulk prices for non-commercial marketings. Commercial marketings include shipments by rail, by boat, and by truck.

Peach prices for the United States advanced by an average of 80 cents a bushel for the 1934 season to 85 cents for 1935, although production for the United States as a whole was higher in 1935 than in 1934. The distribution of this year's crop was considerably different from than of 1934, a much larger proportion of the crop being harvested in the North Atlantic and North Central States where prices to growers ordinarily average prices than for the country as a whole. Prices advanced in most of the Southern States and in Washington, Oregon and California where

production declined. In South Carolina and Georgia prices advanced slightly in spite of increased production in these two States, apparently as a result of a stronger consumer demand.

Citrus Fruit Colony
Sept. article.

AN OMISSION

The omission of just a few words sometimes changes the entire meaning of a sentence, a paragraph or an article. This was the case in the article by Prof. J. R. Winston on "Acetylene Vs. Ethylene for Degreening Citrus Fruit" published in last month's issue of The Citrus Industry.

In the first paragraph on column two of page three the words "on mid-season oranges were omitted, changing the entire meaning of the author. The correct reading of the sentence should be: "It also is used on fruit that regreens during warm weather, although this does not normally oc-

cur on midseason oranges if the fruit is left on the tree."

We deeply regret this omission but hope that this correction may give proper meaning to the article as originally printed.

SEMINOLE COUNTY LEADS
IN FERTILIZER CONSUMPTION
FOR MONTH OF SEPTEMBER

The Bureau of Inspection of the Department of Agriculture reports that the consumption of fertilizer in counties using more than 500 during the month of September was as follows:

Seminole	2034
Palm Beach	1673
Polk	1114
Hillsborough	1083
Orange	873
Dade	779
Lee	712
Broward	618
Manatee	597

Attractive Fruit Properly Presented Solves Marketing Problems

In the successful marketing of citrus fruit as in the marketing of any other commodity, appearance makes the first appeal to the purchaser. And in a perishable commodity, such as citrus fruit is, preservation is of vital importance. These two features of our processing methods mentioned here serve to achieve those purposes.

O K Mold Inhibiting Process

Treats the fruit at the washer which thoroughly sterilizes it at the same time killing all surface mold and provides protection against re-inoculation from surface injuries. It is non-corrosive and is equally effective with oranges, grapefruit and tangerines.

F. M. C. Low Surface Tension Water Wax

The naturally low surface tension of this wax emulsion permits treatment of the fruit in a cold solution as it is not necessary to reduce the surface tension of the emulsion by heating. The wax is of such low surface tension that it spreads uniformly over the entire surface of the fruit, depositing a thin film of wax. Because of the low surface tension of this emulsion no bubbles or drops form on the fruit, which insures rapid drying, while a perfect polish is attained with a minimum amount of brushing. The O K Mold Inhibiting agent prevents decay, while the wax retards shrinkage.

For complete details communicate with

Food Machinery Corporation

Florida, Division

Dunedin, Florida

HISTORY OF CITRUS CULTURE IN FLORIDA

(Continued from page 9)

adjacent to inland waters, lakes and rivers. Plantings were made here and there along the St. Johns River throughout its entire navigable length. The St. Johns River also provided a way of entrance into the interior portion of the state through its tributaries, the Oklawaha River, Dun's Creek and other tributaries. These streams also made it possible to reach areas adjacent to them where the haulage was not too great and difficult. By far the greatest part of the early production was to the northward of the central part of the state and Palatka, St. Augustine, Sanford and Jacksonville, all reached by water, became important shipping centers. The crop of 1886-87 was placed at 1,260,000 boxes. Increase from year to year was steady until the crop of 1893-94 totalled approximately 5,000,000 boxes. The crop of 1894-95 was estimated at 6,000,000 boxes, of which only about half was shipped owing to severe freezes that came during the winter. So great a reduction in the crop resulted that the following year the output was only 147,000 boxes. Again the output increased as the years passed, but it was not until the season of 1908-09 that the crop was back on the pre-freeze basis of 1893-94. Up to this time the largest crop produced by the state was approximately 35,000,000 boxes, 1930-31, of which 27,200,000 boxes were shipped.

Thus it will be seen that in a period of approximately three hundred and sixty-five years, Florida's citrus industry, started in a Spanish St. Augustine garden, has grown to its present scope. Other agricultural industries also have started in a small way and have grown to large size as the years have gone by.

Florida owes its agricultural development in large measure to the introduction of many kinds of plants. That all plants worth while for the state have been introduced and their culture attempted is not the case. There is need for further study and research in the field of new crops for Florida on the part of both individuals and state institutions. The exploration of foreign lands for needed plants is of outstanding importance. Our agriculture can be greatly enriched thereby, for what has been accomplished in the past can be duplicated in the future, though perchance we shall not find another crop so important to the state as the citrus crop.

THIS NITROGEN has those VITAL IMPURITIES

**It is the Natural Product—Safe for your Truck
Crops—the logical Nitrogen for Citrus Fruits**

NATURAL Chilean Nitrate is the nitrogen fertilizer with hidden values—those elements over and beyond its nitrogen—which are so important in today's new knowledge of citrus fertilization.

Nature herself created Natural Chilean Nitrate. Because of this natural origin, it contains at least thirty of the rarer elements. These are the hidden values—minute quantities of such elements as zinc, copper, boron, magnesium, manganese, iodine, potassium, calcium and many others. Not only are these rare elements present in Natural Chilean, *they are present in Nature's own wise blend and balance.*

Natural Chilean Nitrate helps to keep your trees in good condition. It insures fruit and truck of better quality. It means larger, more profitable yield. It is just good business to use this nitrogen with the vital impurities.

Be sure you specify Natural Chilean when ordering. That is the way to make sure.

Natural
CHILEAN NITRATE
THE OLD ORIGINAL SODA

**COUNTY FARM AND HOME
AGENTS WILL ASSEMBLE
IN ANNUAL CONFERENCE**

Florida's county agricultural and demonstration agents will gather at the University of Florida College of Agriculture October 28 for their annual conference, it is announced by A. P. Spencer, vice-director of the

State Agricultural Extension Service. Farm and home problems, programs and plans will compose the principal topics on the program, which will continue through November 1.

There are now 44 county agents and 35 home agents, with a number of others to be appointed before the annual session begins. The new agents will receive valuable instruc-

tions concerning their work.

Agricultural adjustment work, home demonstration problems, Extension assistance in rural rehabilitation, farm credit, community problems, recreation, 4-H club work, changes in farm and home life and adaptation to new conditions, plans of work and reports will receive attention at the session, Mr. Spencer says.

Control Decay & Wilt with BROGDEX

Control of decay and wilt prevalent in early shipments is just a question of the proper treatment of the fruit in its preparation for market.

The long time fruit now is being held in the coloring room materially shortens its keeping life and renders a real decay-shrinkage control treatment indispensable if it is to be delivered sound, plump and attractive.

Brogdex provides just such a treatment. It has been developed and perfected over a period of years and is recognized as by far the most effective method yet developed. It has no worthy rival.

The success of Brogdex is due largely to the ingenious method used in applying the wax to the fruit. This is done by melting and forcing it through an atomizer under pressure, producing a wax fog through which the fruit passes while being polished. This spreads the wax uniformly without unduly sealing the pores and stem through which the fruit must breathe to prevent smothering.

Other schemes for applying the wax, involving the use of cold wax and wax emulsions, are sometimes offered as "cheap" imitations or substitutes for Brogdex. But do not be misled. Cold wax does not put enough coating on to do any good; while wax emulsions often cause internal breakdown by putting too much on in the wrong place and smothering the fruit.

If you plan to use the new "Color Added" process this season — which we will be glad to furnish you — it is all the more important that you use Brogdex to control decay and shrinkage. This is necessary because the chemicals used in the Color Added process act as a solvent and remove much of the wax natural to the fruit, without which it shrivels and shrinks very quickly.

If you are not already a Brogdex-Color Added house we can make you a very attractive proposition involving very little cash and enabling you to pay as you go. May we talk the matter over with you? A wire or phone call will bring a representative to you at once, without obligation, of course.

Florida Brogdex Distributors, Inc.

B. C. Skinner, Mgr.

Dunedin, Florida

Twenty-two

More than 50 percent of the citrus produced in Florida is grown on Norfolk soils.

As the ground is more moist than it has been at this season for several years, this fall is a good time to seed winter cover crops of vetch and Austrian peas.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, OF THE CITRUS INDUSTRY, PUBLISHED MONTHLY AT BARTOW, FLORIDA, FOR SEPTEMBER, 1935. COUNTY OF POLK. STATE OF FLORIDA.

Before me, a notary public in and for the State and county aforesaid, personally appeared S. Lloyd Frisbie, who having been duly sworn according to law, deposes and says that he is the Business Manager of The Citrus Industry, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management, (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 411, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher — Associated Publications Corp., Bartow, Fla.
Editor — S. L. Frisbie, Tampa, Fla.
Business Manager — S. Lloyd Frisbie, Bartow, Fla.

2. That the owners are:
Associated Publications Corporation, Tampa, Florida.

S. L. Frisbie, Tampa, Fla.
S. Lloyd Frisbie, Bartow, Fla.
B. L. Gable, Lutz, Fla.
F. L. Skelly, Orlando, Fla.
Frank Kay Anderson, Altamonte Springs, Fla.

B. W. Skinner, Dunedin, Fla.
F. P. Wall, Mansfield, Ohio.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

American Fire & Casualty Co., Orlando, Fla.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

S. LLOYD FRISBIE,
Business Manager.

Sworn to and subscribed before me this 30th day of September, 1935.

(SEAL) H. M. STANFILL,
Notary Public.

(My commission expires 10-30-1938)

IF suffering with Piles, I want to help you. Drop me a line explaining.

Fred C. Whitney
317 6th Ave., Des Moines, Iowa

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Advertisements

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

CAUSERIENCE LEPIDOFLOIA — (So-called Brazilian oak), resembles Australian pine. Grand for wind-breaks. Cold resistant. Beautiful. Send for sample of foliage, \$6.00 per 100. S. F. Matthews, Homestead, Fla.

FOR SALE — 80 acres good citrus land, two miles northwest of Cocoa, Brevard County, Florida. Price \$1600.00 cash. S. Hendry, City Point, Florida.

FILMS DEVELOPED 2 prints of each 25c; 20 reprints 25c. Pine Photo, Y-5134 Nevada, Chicago.

PERSONAL

QUIT TOBACCO easily, inexpensively, without drugs. Send address. N. A. Stokes, Mohawk, Florida.

THRIFTY TREES and budwood from record performance Perrine Lemon parents, Persian Lime and other citrus varieties. DeSoto Nurseries, DeSoto City, Fla.

CROTALARIA — New crop, high quality, double cleaned, scarified Crotalaria Striata seed for sale. Attractive prices. Carolinas' Crotalaria Co., Camden, S. C.

UP to \$20.00 paid for Indian Head Cents; Half Cents \$125.00; Large Copper Cents \$500.00, etc. Send dime for list. Roman-coinshop, D. Springfield, Mass.

Large citrus trees for replanting at special low price. Grafted avocado trees and budwood of Perrine lemon and Tahiti limes.

WARD'S NURSERY
Avon Park, Fla.

MEN WANTED—Sell Shirts. No experience necessary. Free samples. Commission in advance. Free ties with shirts. Carroll Mills, 875A Flatbush Av., Brooklyn N. Y.

October, 1935

POSITION WANTED — Managing, caring for citrus grove, for good, reliable party. Highest type reference gladly furnished. H. A. KUTER, Elkton, Fla.

WANTED—To hear from owner of land for sale. O. Hawley, Baldwin, Wis.

FREE Booklet describes 87 plans for making \$20-\$100 weekly, home or office, business your own. Elite Service, 505 Fifth ave., New York City.

CLEOPATRA MANDARIN and Sour Orange rood stook. Also Hamlin, Valencia and Persian Lime budded trees. Grand Island Nurseries, Eustis, Fla.

WANTED—To hear from owner having good farm for sale. Cash price, particulars. John Black, Chippewa Falls, Wisconsin.

PUREBRED PULLETS FOR SALE—White Leghorns and Anconas ready to ship. Barred Rocks and R. I. Reds shortly. Several hundred yearling White Leghorn hens now laying 70%. Write or wire for prices. C. A. Norman, Dr. 1440. Knoxville, Tenn.

LAREDO SOY BEANS, considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Alabama, for prices.

FANCY ABAKKA pineapple plants. R. A. Saeger. Ankona, Florida.

FOR SALE—Selected budwood and trees of Perrine lemon, Tahiti lime, new varieties tangelos and other citrus. Ward's Nursery, Avon Park, Fla.

SCENIC HIGHWAY NURSERIES has a large stock of early and late grapefruit and oranges. One, two and three year buds. This nursery has been operated since 1883 by G. H. Gibbons, Waverly, Fla.

NEW COMMERCIAL lemon for Florida, the Perrine; proven. All residents need yard trees, keeping Florida money at home. Booking orders for budded stock for Winter delivery. DeSoto Nurseries, DeSoto City, Fla.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

SEED—Rough lemon, sour orange, cleopatra. New crop from true parent trees. Also thrifty seedlings. DeSoto Nurseries, De Soto City, Florida.

BUDDED trees new Florida commercial lemon, proven, thin skinned, juicy, scab immune. Also rough lemon, sour orange and Cleopatra seed and lining out seedlings. DeSoto Nurseries, DeSoto City, Fla.

SEEDS—ROUGH LEMON, SOUR ORANGE, CLEOPATRA. Pure, fresh, good germination. Also seedlings lineup size. De Soto Nurseries, DeSoto City, Fla.

CROTALARIA SPECTABILIS—Seed for sale. New crop, well cured, bright and clean. Price 25c per pound in 100 pound lots and over, 80c per pound in less quantities. L. O. Hastings, Bunnell, Lowell and San Antonio, Florida. F. M. LEONARD & COMPANY, Hastings, Florida.

WANTED—Position as packing house foreman; in citrus business twenty-five years; ten years' experience as foreman; married man. J. R. Henry, Okahumpka, Florida.

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